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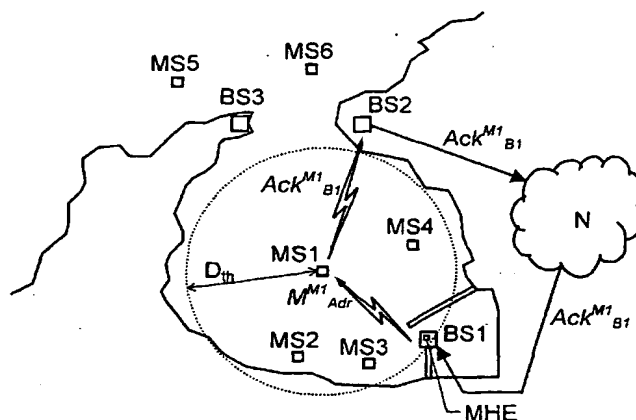
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(54) Title: AUTONOMOUS COMMUNICATION SYSTEM



(57) Abstract: The invention relates to communication of data in a time division multiple access system where the data is transmitted wirelessly between station (MS1-MS6; BS1-BS3) in time slots. The time slots are arranged in frames of a repeating frame structure. The stations (MS1-MS6; BS1-BS3) autonomously select time slots for transmission of data according to a self-organizing transmission algorithm, which allows a first station (MS1) to reuse a time slot that is allocated to a second station (MS2-MS6, BS2, BS3). According to the invention an addressed message (M^{M1}_{Adr}) is sent from a first base station (BS1) to a mobile station (MS1). This station transmits an acknowledgement message (Ack^{M1}_{B1}) in response to the addressed message (M^{M1}_{Adr}) in order to confirm a safe receipt of the addressed message (M^{M1}_{Adr}). If due to for example a high traffic load, the acknowledgement message (Ack^{M1}_{B1}) cannot be received directly by the first base station (BS1), the mobile station (MS1) sends this message (Ack^{M1}_{B1}) via a second base station (BS2) to a message handling entity (MHE) in a network (N), which is responsible for the transmission of the addressed message (M^{M1}_{Adr}). The message handling entity (MHE) may either be a separate node in the network (N) or be included in the first station (BS1). Thanks to the proposed solution, unnecessary repeated transmissions of the addressed message (M^{M1}_{Adr}) can be avoided, and consequently valuable wireless bandwidth be saved.



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